

CLAIMS

What is claimed is:

1. A device for changing a termination voltage of a differential data bus, the differential data bus comprising a first data bus and a second data bus, the device comprising:

a first adjustable termination path connectable to the first data bus;

a second adjustable termination path connectable to the second data bus; and

a switch connectable in parallel with the first adjustable termination path and the second adjustable termination path.

2. A device as in claim 1 wherein the differential data bus comprises a differential twisted pair line.

3. A device as in claim 1 wherein the first adjustable termination path is 50 ohm to -2 volts or 100 ohms between the first data bus and the second data bus.

4. A device as in claim 1 wherein the second adjustable termination path is 50 ohm to -2 volts or 100 ohms between the first data bus and the second data bus.

5. A device as in claim 1 wherein the switch is a field effect transistor (FET).

6. A method for changing terminations in an emitter coupled logic (ECL) transceiver having a differential data bus, the method comprising the steps of:

connecting a variable termination to the differential data bus, wherein the variable termination is a first termination path or two second termination paths, the differential data bus having:

a first data bus; and

a second data bus;

enabling the first termination path when the ECL transceiver is in a receive mode; and

enabling the two second termination paths when the ECL transceiver is in a transmit mode.

7. A method as in claim 6 wherein the step of connecting the variable termination to the differential data bus further comprises the step of:

connecting a field effect transistor (FET) to the variable termination, wherein the FET enables the first termination path or the second termination path.

8. A method as in claim 6 wherein the step of enabling the first termination path further comprises the step of configuring the first termination path to be 100 ohms between the first data bus and the second data bus.

9. a method as in claim 6 wherein the step of enabling the two second termination paths further comprises the steps of:

configuring a first one of the two second termination paths to be 50 ohms between the first data bus and a -2vdc source; and

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 configuring a second one of the two second termination paths to be 50 ohms between the second data bus and the -2vdc source.

10. An apparatus for changing terminations in an emitter coupled logic (ECL) transceiver having a differential data bus, the apparatus comprising:

a variable termination connectable to the differential data bus; the variable termination comprising a first termination path or two second termination paths, , the differential data bus having:

a first data bus connectable to the ECL transceiver; and

a second data bus connectable to the ECL transceiver.

11. An apparatus as in claim 10 wherein the variable termination further comprises :

a field effect transistor (FET), wherein the FET enables the first termination path or the second termination path.

10⁷ 12. An apparatus as in claim 10 wherein the first termination path further comprises 100 ohms between the first data bus and the second data bus.

13. An apparatus as in claim 10 wherein the two second termination paths further comprises:

a first one of the two second termination paths to be 50 ohms between the first data bus and a -2vdc source; and

a second one of the two second termination pates to
 be 50 ohms between the second data bus and the -2vdc
 source.

14. A device for changing a termination voltage of a
 differential data bus, the differential data bus
 comprising a first data bus and a second data bus, the
 device comprising:

a resistive circuit connecting the first and second
 data buses to each other; and

a switch circuit located between the resistive
 circuit and a negative voltage source,

wherein the switch circuit has a connection point
 with the resistive circuit between two resistors of
 the resistive circuit, and wherein the switch
 circuit is operable to selectively connect the first
 and second data buses, respectively through
 individual ones of the two resistors, to the
 negative voltage source.

15. A device as in claim 14 wherein the resistive
 circuit connecting the first and second data buses to
 each other further comprises two series connected 50 ohm
 resistors.

16. A device as in claim 14 wherein the switch circuit
 located between the resistive circuit and a negative
 voltage source further comprises a field effect
 transistor.

17. A device as in claim 14 wherein the negative voltage
 source further comprises -2vdc.

18. ~~At least one program storage device~~ readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for changing terminations in a programmable logic device (PLD) having a multi-mode data bus, the method comprising the steps of:

connecting a variable termination to the multi-mode data bus, wherein the variable termination is a first termination path or two second termination paths, the multi-mode data bus having:

a first data bus; and

a second data bus;

enabling the first termination path when the PLD is in a receive mode, and

enabling the two second termination paths when the PLD is in a transmit mode.

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